

Remarks:

1. Regarding the further objection to the embedded links, the applicant submits herein the further amended specification page 1 to eliminate the inadvertently reintroduced embedded links by changing them completely into descriptive terms, i.e., --websites of "ecode.com", "planetall.com" and "backup.com"--.
2. Regarding the further objection to claim 11, it has been amended to clarify that at each node of corresponding branches of the hierarchical tree a pointer is provided.
3. The applicant appreciates that the examiner has withdrawn the previous formality objections to other claims 4, 5, and to the drawings.
4. The applicant has submitted further amended claims 1 and 8, and new claims 13-16. It is believed that the further amended claims 1 and 8, and new claims 13-16 are supported by the original disclosure as seen on pages 9-12, regarding the structure of the hierarchical tree, such as node, branch, etc. and the division of the inquiry stream of characters or phonetic spelling characters. Further, the divided characters form meaningful words that are used, respectively, to do the search so as to obtain result collections and then the final result collections.
5. Further, Fig. 3B has been amended to correct the reference numerals therein from "65, 66, 67, 69" to --55, 56, 57, 59--. Fig. 3A is amended to change numeral "69" to --59--. These changes are believed to be consistent with the corresponding description, and to avoid duplicate use of the numerals.
6. With respect to the patentability of claim 1 and other obviousness rejection of all pending claims 1-5, 7-12 under 35 USC 103(a) in view of Teare et al and Wlaschin, the applicant would like to submit the following arguments for the examiner's reconsideration.

First of all, the applicant submits herein the amended claims to further clarify the specific arrangement of the hierarchical tree and the Hash table of the present invention, and define the specific way of "fuzzy" search. In view of the amended claims, it is believed that none of the cited prior art has disclosed or taught the present invention as claimed. As described in the reference of Teare et al, the method and/or system thereof is primarily for navigating network resources based on metadata, and it utilizes designed name file 64 in such a format that is compatible with the RDF format (file 900) and that contains a schema section (902) and a data section (904). More specifically, the invention of Teare et al involves creation and use of metadata, that is, data that describes other data, and is associated with network resources. In the data section 904 of the name file 64, the metadata, as so designated, include real name value, language identifier value, description value, and (geographic) region identifier value, and creation and use of index of metadata registry to facilitate the search or retrieval of the relevant network resource or resources. Hence, the name file 64 including such metadata is designed to assist the search and retrieval of relevant network resource or resources.

It is true that Teare et al mentions that the name file 64 can be person rather than web pages (its column 8, lines 14-20), and the metadata of the name files 64 may include a mailing address, email address, and other personal information. Thus, the system can be used as a person locator rather than network resources navigator. The name file 64 including such metadata is designed to assist the search and retrieval of relevant person, that is, conventionally an entry or a list of the person appearing somewhere. To enable such a person locator, the name files 64 should be created in such a format, and should be associated with a corresponding index thereof as described in the reference above. That is to say the name file 64 containing such metadata of a person is an intermediate means used to facilitate the search or retrieval of the information of the person, not the set of personal information to be retrieved. Accordingly, the name file of Teare et al is not the same as the "web card" of the present invention, that is, the set of personal information to be retrieved.

It is also true that Teare et al mentions the use of exact and inexact search as seen in its column 21, lines 39-62. Again, it should be understood that either exact or inexact search of Teare et al should be conducted using the particular search method as discussed above, that is, the name file with metadata, the corresponding index of metadata, and a centralized database or a distributed database system implemented with the described search method. Particularly, it can be seen that the inexact search of Teare et al does not require that the entered words or phrase be broken down into several (all possible) meaningful words composed of the entered characters, but the exactly entered word or words are used for the search to lead to possible results that contain the entered word or words. This so-called inexact search does nothing more than the conventional inexact search that generates a list of all possible results containing the search word or words, and being arranged through weighting process from the most likely result to the least likely one. This is not efficient, and may not always lead to the desired result if the entered word might not be quite pertinent as a searcher thought. As discussed in the background of the present specification, the present invention is created to resolve such undesired search results through such exact or inexact search. Through the use of the fuzzy search of the present invention, the desired "web card" (of personal information) may be retrieved in a more efficient and precise way.

The web card of the present invention not just has a more humanized and customized display format as seen in Fig. 2C, but it is the "card" (of personal information) to be retrieved and displayed. More importantly, the search of the present invention will be conducted not only the exact search, but also a specified "fuzzy" search in which the entered inquiry words or phrases (a stream of characters) will be broken into several (all possible) meaningful words composed of the characters of the inquiry in accordance with the predetermined rules as stored in a memory of the database (for the web cards). Clearly, the method of the present invention is different from the method of Teare et al because the search of the present invention does not require such "name file 64" containing such metadata to facilitate the search. Instead, the present invention conducts the "fuzzy" search as described above and defined in the claims. More detailed

description of the "fuzzy" search of the present invention can be found on page 12 of the present application.

It is true that Teare et al mentions "directory tree" in line 31 of its column 7. However, it is understood that the "directory tree" is commonly used in the art. Directory is a broader term, and there could be name directory, telephone directory, and any kinds of things for directories. However, the information in the directory may not be necessarily arranged in hierarchical form, for instance, a directory may have an array arrangement, RDBMS form, etc. A "hierarchical tree" is a particular arrangement of data or information within a directory, as one of many possible ways. A "hierarchical tree" is a structure that may be used for all kinds of things so long as it is arranged in such a structure. As specified in Teare et al, each network address must be logically subordinate to or descended from the network address in the RNS file that is shortest in characters, and all subsequent resource declarations would be required to identify network addresses that specify files located within the directory tree for which www.centraal.com is the root node. It appears then that the RNS files (or name files containing RNS entry) are arranged in the directory tree in Teare et al. Whilst in the present invention, it is the personal and business information stored in the web card database is arranged in a hierarchical tree. Again, it should be understood that the directory tree or hierarchical tree may be used for various or different purposes as they are known in the art. Therefore, it can be seen that the directory tree of Teare et al and the hierarchical tree of the present invention are for different purposes and applications.

As noted by the examiner, Teare does not specifically show that the tree is denoted with a hash table, while Wlaschin mentions to use hashing to represent data. However, it is submitted that the hashing mentioned in Wlaschin may not be necessarily properly used in the search method of Teare et al because Teare uses a completely different approach, that is, based on metadata for the search, and thus Teare teaches away from possibly using hashing. Further, it may be known that Hash table is usually used for exact search.

The particular hierarchical tree of the present invention is shown in Fig. 3A and 3B. It has characters along the route of the hierarchical tree from the hash table to the node, and thus the characters along the route form a Chinese word or phrase. For a phonetic spelling inquiry stream, the spelled letters for a character locate along the route of the hierarchical tree to the node as seen in Fig. 3A. Further, it can be seen that Hash table is used in connection with the hierarchical tree such that there is a branch of the hierarchical tree under each entry contained in the Hash table. Such a particular arrangement of hierarchical tree and Hash table is not shown in Wlaschin nor in Teare et al. Thus, it is believed that the specified combined use of both should not be obvious in view of the cited reference, and thus the limitation has been added into the new set of claims.

For fuzzy search of the present invention, the entered character stream A will be divided into several meaningful words through a dictionary with predetermined rules, and each of the meaningful words is composed of the entered characters. Those words constitute a primary word collection W. Each word Wx of the word collection W will be computed, in the same way of exact search, to local a node Nx, and the search will generate a result collection Rx. Since each divided word Wx may generate a search result collection Rx, all of the result collection Rx will be weighted and arranged in a big result collection R that has been sorted and restricted under certain rules so as to obtain the selected final result collections R. This particular fuzzy search has been illustrated in Fig. 4B, and described on page 12 of the specification. It is believed that such a particular fuzzy search is not disclosed, nor taught by any of the prior art.

In view of the above discussion, the patentability of the present invention should become clear. Accordingly, the applicant submits the amended claims 1-5, 7-12, and adds claims 13-16 to distinguish the claimed invention from the prior art.

It is respectfully submitted that the amended application documents should have overcome all of the objections thereto, and the rejection of the present invention being claimed. Therefore, the objections or rejections should be considered withdrawn.

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As discussed above, the present invention as defined in the amended claims should be clearly different from the cited Teare et al Patent and Wlaschin Patent. Accordingly, it is respectfully submitted that the present invention is patentable in view of the prior art, and the early allowance of the application is respectfully requested.

Respectfully submitted,

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